



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,457	06/08/2001	Zuomin Dong	5692-002	2287

7590

07/30/2003

CHARLES A. LAFF

Laff, Whitesel & Saret / Michael Best & Friedrich
Suite 1700
401 North Michigan Ave.
Chicago, IL 60611

EXAMINER

BELL, BRUCE F

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/877,457

Applicant(s)

DONG ET AL.

Examiner

Bruce F. Bell

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-39 is/are allowed.
- 6) ☒ Claim(s) 1-3,6,7 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 4,5 and 8-13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1746

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 6, 7, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Grot (6428921 B1).

Grot discloses a fuel cell stack having a top and bottom end plate assembly 14 and 16, a set of screws 30 which are inserted through an upper plate 26. At least one fuel cell assembly is interposed between the top and bottom end plates. A clamp mechanism operatively compresses the stack. A plurality of screws 30 threaded through threaded bores in the top end plate at spaced locations in the top end plate and bearing at their lower ends on an upper face of a distributor face (compression plate) are selectively tightened to provide substantially uniform torque in each screw which assures uniform compressive loading across the areas of the distributor plate and thereby across the area of the fuel cell assembly. See abstract and col. 4, lines 23-49.

The prior art of Grot anticipates the applicant's instant invention as set forth above. The distributor plate as set forth in the patent is construed by the examiner to be the compression plate. The prior art device discloses a solid cage having a pressure plate disposed between a top and bottom end plate which are connected together by struts in a fixed relationship and the screws in the top end

Art Unit: 1746

plate force displacement of the distributor plate down to uniformly contact and seal by compressive forces the fuel cell stack. Therefore, the prior art of Grot anticipates the applicant's instant invention as set forth above.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamoshita (4623596).

Kamoshita disclose a fuel cell assembly having two pairs of manifolds for supplying air, fuel and coolant to the fuel cell. Manifolds 32, 33 direct air to and from the fuel cell assembly and manifolds 34, 35 direct fuel and coolant to and from the fuel cell assembly. The flow of oxidant is perpendicular to that of the fuel supply and coolant supplies. See Figure 1, 4 and 5; col. 3, lines 12-31 and col. 4, line 57 – col. 5, line 23.

Kamoshita anticipates the applicant's instant invention as set forth above.

Allowable Subject Matter

5. Claims 4, 5, 8-13, 18-39 are allowable over the prior art of record.

6. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 1746

The prior art of record fails to teach and/or suggest a solid cage for a fuel cell having vertically compressible springs disposed between jack screws and a pressure plate in the cage assembly. The prior art also further fails to disclose struts of L shaped construction to form vertically extending inside corner to engage with the vertical edge corners of the fuel cell assembly, to prevent horizontal displacement of the fuel cell stack relative to the cage, nor does the prior art teach the use of non-conductive liners disposed between the struts and the fuel cell stack to electrically insulate the struts from the fuel cell stack. The attachment between the strut and the end plate is also not taught or suggested. The combination of the manifolding and compression mechanism in the solid cage is also not taught or suggested.

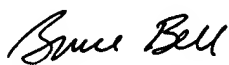
7. Claims 4, 5 8-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 703-308-2527. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 703-308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Art Unit: 1746

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Bruce F. Bell
Primary Examiner
Art Unit 1746

BFB
July 27, 2003